# RULE 63 (37 C.F.R. 1.63) INVENTORS DECLARATION FOR PATENT APPLICATION IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

As a below named inventor, I hereby declare that my residence, mailing address and citizenship are as stated below next to my name, and I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

			OPTICAL AMPLIFIER		
the spe	cification of which (check a is attached hereto	applicable box(es)):			
[]	was filed on		as U.S. Application Serial N	0.	(Atty. Dkt. No
[X]	was filed as PCT Internati	onal application No.		on	
and (if	applicable to U.S. or PCT a	application) was amende	ed on		,
amend defined listed b which p	ment referred to above. I a in 37 C.F.R. 1.56. I hereb elow and have also identifi priority is claimed or, if no p Foreign Application(s):	acknowledge the duty to by claim foreign priority it ed below any foreign ap triority is claimed, before	penefits under 35 U.S.C. 119/365	nformation known to m of any foreign applica certificate having a filin	ne to be material to patentability as tlon(s) for patent or inventor's certificat g date before that of the application on
•	Application Number	er	Country		Day/Month/Year Filed
	0317530.4		GB	·····	26-Jul-2003
I hereb	y claim the benefit under 3 Application Numbe		United States provisional applica Date/Month/Year Filed	ation(s) listed below.	
l hereb	y claim the benefit under 3	5 U.S.C. 120/365 of all	prior United States and PCT Inter	national applications li	sted above or below:
Prior L	J.S./PCT Application(s):				Status: patented
. Applic	ation Serial No.		Day/Month/Year Filed		pending, abandoned
PCT/G	B04/003190		23-Jul-2004		PENDING
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1.	Inventor's Signature:	X 1	eR		Date: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	Inventor:	Richard	M	Jenkins	British
		(first)	MI	(last)	(ćitlzenship)
	Residence: (city) Mailing Address:	Malvern	stat) vern Technology Centre, St Andre	e/country) UK	/organiarshira
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2.	Inventorio Signaturo:				Date:
۷.	Inventor's Signature: Inventor:	Mark	E	McNie	British
	, willwir	(first)	MI	(last)	(citizenship)
	Residence: (city)	Malvern		te/country) UK	· · · · · · · · · · · · · · · · · · ·
	Residence: (city) Mailing Address: (Zip Code)		(stat vern Technology Centre, St Andre		/orcestershire

#### Serial No. Page 2

3.	Inventor's Signature:				Date:	
	Inventor:	James		McC	Quillan	British
		(first)	MI	(la	ast)	(citizenship)
	Residence: (city)	Malvern		(state/country)	United Kingdom	, ,,
	Mailing Address:	QinetiQ Limited, Malvern	Technology Centre, S	t Andrew's Road,	Malvern, Worcestershire	
	(Zip Code)	WR14 3PS				
4.	Inventor's Signature:				Date:	
	Inventor:	Craig	D	Sta	зсеу	British
		(first)	M		ast)	(citizenship)
	Residence: (city)	Malvern	••••	(state/country)		(,
	Mailing Address:	QinetiQ Limited, Malvern	Technology Centre, S			
	(Zip Code)	WR14 3PS				
5.	Inventor's Signature:				Date:	
	Inventor:					
		(first)	MI	(la	ast)	(citizenship)
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FOR ADDITIONAL INVENTORS, check box [ ] and attach sheet with same information and signature and date for each.

Case No:P7294/USW

Nixon & Vanderhye P.C. (10/99) (Domestic Non-Assigned/Foreign) Page 1

# RULE 63 (37 C.F.R. 1.63) INVENTORS DECLARATION FOR PATENT APPLICATION IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

As a below named inventor, I hereby declare that my residence, mailing address and crizenship are as stated below next to my name, and I believe I am the original, first and sole Inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: OPTICAL AMPLIFIER the specification of which (check applicable box(es)): is attached hereto (Atty. Dkt. No.\_\_\_ [] as U.S. Application Serial No. was filed on [] OΩ was filed as PCT International application No. [X] and (if applicable to U.S. or PCT application) was amended on I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. | acknowledge the duty to disclose to the Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1,56. I hereby claim foreign priority benefits under 35 U.S.C. 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is dalmed or, if no priority is claimed, before the filing date of this application: Day/Month/Year Filed Priority Foreign Application(s). Country **Application Number** 26-Jul-2003 0317530.4 I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below. Date/Month/Year Filed Application Number I hereby claim the benefit under 35 U.S.C. 120/365 of all prior United States and PCT international applications listed above or below; Status: patented Prior U.S./PCT Application(s): pending, abandoned Day/Month/Year Filed Application Serial No. 23-Jul-2004 PCT/GB04/003190 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. And on behalf of the owner(s) hereof, I hereby appoint Nixon & Vanderhye P.C., telephone number 703-816-4000 (to whom all communications are to be directed) and the attorneys of. Customer Number 23117, individually and collectively owner's/owners' attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith and with the resulting patent. I also authorize Nixon & Vanderhye to add or delete attorneys from that Customer Number, and to act and rely solely on instructions directly communicated from the person, assignee, attorney, firm, or other organization sending instructions to Nixon & Vanderhye on behalf of the Date: Inventor's Signature: Brilish 1. Jenkins Richard Inventor: (citizenship) (last) MI (first) (state/country) Malvern Residence: (city) QinetiQ Limited, Malvern Technology Centre, St Andrew's Road, Malvern, Worcestershire Mailing Address: **WR14 3PS** (Zip Code) Jan 06 Date: 20 Inventor's Signature: British 2. McNie Ě Mark Inventor: (citizenship) (last) M (first) (state/country) Malvern Residence: (city) QinetiQ Limited, Malvern Technology Centre, St Andrew's Road, Malvern, Worcestershire Mailing Address: WR14 3PS (Zip Code)

Nixon & Vanderhye P.C. (10/99) (Domestic Non-Assigned/Foreign)

Serial	No.
Page	2

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1,	Inventor's Signature: Inventor:	James (first)	MI	McQuillan (last)	British (cluzenship)
	Residence: (cily)			(state/country) United Kings	o otornhice
		QinetiQ Limited, Malvern T	echnology Centre, S	Andrew's Road, Malvern, Word	estersini 6
	Malling Address: (Zip Code)	WR14 3P\$			
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1.	Inventor's Signature:			Stacey	British
	Inventor:	Craig	-	(last)	(citizenship)
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	Residence: (city)	Malvern		(state/country) United King	octorchire
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٥.	Inventor:				(citizenship)
	11110111011	(first)	MI	(last)	
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	myona.	(first)	MI	(last)	(citizenship)
	Residence: (city)	121		(state/country)	
	Mailing Address:				
	(Zip Code)				

Insert inventors 7-12 before "FOR ADDITIONAL INVENTORS" on page 2; inventors 13-16 should be on PAGE 3 FROM THE TOOLBAR ABOVEI

FOR ADDITIONAL INVENTORS, check box [ ] and attach sheet with same information and signature and date for each.

Nixon & Vanderhye P.C. (10/99) (Domestic Non-Assigned/Foreign) Page 1

## RULE 63 (37 C.F.R. 1.63) INVENTORS DECLARATION FOR PATENT APPLICATION IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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			OPTICAL AMPLIFIER	₹	
	ification of which (check	applicable box(es)):			
	s attached hereto				
[] \	was filed on		as U.S. Application S	erial No.	(Atty. Dkt. No
[X] \	was filed as PCT Internat	ional application No.		on	
and (if a	pplicable to U.S. or PCT	application) was amended of	on		
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	Application Numb	er	Country		Day/Month/Year Filed
	0317530.4		GB		26-Jul-2003
	Application Numb		Date/Month/Year I		listed above or below:
Prior U.	S./PCT Application(s):				Status: patented
	tion Serial No.		Day/Month/Year F	iled	pending, abandoned
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1.	Inventor's Signature:				Date:
	Inventor:	Richard	М	Jenkins	British
	Residence: (city)	(first)	MI	(last)	(citizenship)
	Mailing Address:	Malvern OinetiO Limited Malvern	Tachnology Contro. S	(state/country) <u>UK</u> t Andrew's Road, Malvern, V	Morgostorobiro
	(Zip Code)	WR14 3PS	reciniology centre, 5	Andrew's Road, Malvern, V	Voicestersille
2.	Inventor's Signature:				Date:
<u>.</u> .	Inventor:	Mark	E	McNie	Brilish
		(first)	MI	(last)	(citizenship)
	Residence: (city)	Malvern		(state/country) ÚK	,
	Mailing Address:	QinetiQ Limited, Malverr	Technology Centre, S	Andrew's Road, Malvern, V	Vorcestershire
	(Zip Code)	WR14 3PS			

Serial No. (Domestic Non-Assigned/Foreign) fames ME Page 2 3. Inventor's Signature: Inventor: McQuillan British (last) (citizenship) Malvern (state/country) United Kingdom
QinetiQ Limited, Malvern Technology Centre, St Andrew's Road, Malvern, Worcestershire Residence: (city) Mailing Address: (Zip Code) **WR14 3PS** 4. Inventor's Signature: Date: Inventor: Craig D Stacey British (first) МІ (last) (citizenship) Residence: (city) Malvern (state/country) United Kingdom Mailing Address: QinetiQ Limited, Malvern Technology Centre, St Andrew's Road, Malvern, Worcestershire WR14 3PS (Zip Code) 5. Inventor's Signature: Date: Inventor: (first) МІ (citizenship) (last) Residence: (city) (state/country) Mailing Address: (Zip Code) 6. Inventor's Signature: Date: Inventor: (first) MI (citizenship) (last) Residence: (city) (state/country) Mailing Address: (Zip Code)

FOR ADDITIONAL INVENTORS, check box [ ] and attach sheet with same information and signature and date for each.

Nixon & Vanderhye P.C. (10/99)

Nixon & Vanderhye P.C. (10/99) (Domestic Non-Assigned/Foreign) Page 1

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OPTICAL AMPLIFIER

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	is attached hereto	application box(es)).			
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herel	by claim the benefit under 3	5 U.S.C. 120/365 of all	prior United States and PCT international a	pplications listed abov	ve or below:
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herek mprise applica 4000 ( owner resulting	and further that these statement, or both, under Section or any patent issued that to whom all communication is/owners' attorneys to prosing patent. I also authorize by communicated from the picts.  Inventor's Signature: Inventor:  Residence: (city) Mailing Address: (Zip Code)  Inventor's Signature: Inventor's Signature: Inventor:	tements were made wition 1001 of Title 18 of nereon. And on behalf is are to be directed) are ecute this application a Nixon & Vanderhye to erson, assignee, attorn Richard (first) Malvern QinetiQ Limited, MaWR14 3PS  Mark (first) Malvern  Mark (first) Malvern	th the knowledge that willful false statement the United States Code and that such willful of the owner(s) hereof, I hereby appoint Nix and the attorneys of: Customer Nu and to transact all business in the Patent and add or delete attorneys from that Customer ey, firm, or other organization sending instructions of the patent of the patent and the pa	s and the like so made I false statements may con & Vanderhye P.C. mber 23117, i d Trademark Office co Number, and to act ar uctions to Nixon & Var  Date: enkins (last) ) UK I, Malvern, Worcesters  McNie (last) ) UK	e are punishable by fine or y leopardize the validity of the telephone number 703-81 andividually and collectively nnected therewith and with addrely solely on instruction addrelye on behalf of the  British (citizenship)  Shire  British (citizenship)

#### Serial No. Page 2

3.	Inventor's Signature:				Date:	
	Inventor:	James		McC	uillan	British
		(first)	MI	(la	ast)	(citizenship)
	Residence: (city)	Malvern		(state/country)	United Kingdom	
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	(Zip Code)	WR14 3PS				
4.	Inventor's Signature:	mh			Date:	21st December 2005
••	Inventor:	Craig	D	Sta	acey	Brilish
		(first)	MI		ast)	(citizenship)
	Residence: (city)	Malvern	••••	(state/country)	Únited Kingdom	
	Mailing Address:	QinetiQ Limited, Malvern	Technology Centre.		Malvern, Worceste	ershire
	(Zip Code)	WR14 3PS				
5.	Inventor's Signature:				Date:	
	Inventor:					
	mvontor.	(first)	MI	(la	ast)	(citizenship)
	Residence: (city)			(state/country)		
	Malling Address:			_		
	(Zlp Code)					
6.	Inventor's Signature:				Date:	
•	Inventor:				<del></del>	
		(first)	MI	(la	ast)	(citizenship)
	Residence: (city)			(state/country)		
	Malling Address:					
	(Zlp Code)			<del></del>		
	\p					

FOR ADDITIONAL INVENTORS, check box [ ] and attach sheet with same information and signature and date for each.

#### IPD/P7294/USW

## ASSIGNMENT OF PATENT APPLICATION.

Richard M JENKINS

	Mark E MCNIE James McQUILLAN Craig D STACEY
(Inventors)	
	In consideration of past and future employment, and my (our) obligation to assign intellectual property generated as result of my (our) employment, the receipt and sufficiency of which consideration is hereby acknowledged, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to
(Assignee)	( QINETIQ LIMITED
(Address)	(of 85, Buckingham Gate, London SW1E 6PD United Kingdom
	(hereinafter designated as the Assignee) the undersigned's entire right, title and interest for the United States, its territories, dependencies and possessions, and for the country of
(Other	( in the invention, and all application for patent and any Letters
Countries)	Patent which may be granted therefor, known as
(Title)	OPTICAL AMPLIFIER (Case No. P7294/USW
•	for which the undersigned has (have) executed on even date herewith an application
	for patent in the United States of America or, if not on even date, then has executed
	(on or has already filed in
	(U.S. appln. Serial No, filed on
	(The undersigned acknowledges an obligation of assignment of this invention to said assignee at the time the invention was made.

The undersigned agree(s) to execute all papers and documents necessary in connection with the application or any interference which may be declared and any continuing or divisional applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient and further to perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

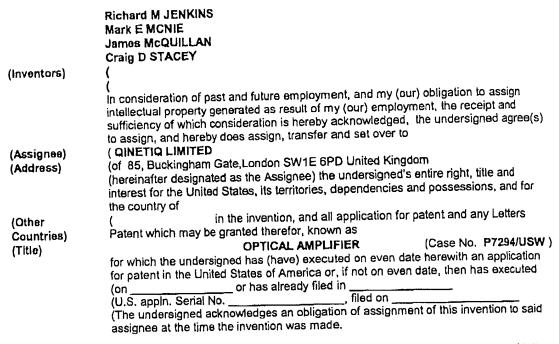
The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the firm of NIXON & VANDERHYE P.C. the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document.

In witness whereof, exe	cuted by the undersigned on the date(s	) opposite the unde	rsigned signature(s).
Signature of Inventor	Richard M JENKINS	Date 0	01/2006
Witnessed by	Troudrok	Date 15th J	ansary 2000
Signature of Inventor	Mark E MCNIE	Date	
Witnessed by		Date	
Signature of Inventor	James McQUILLAN	Date	
Witnessed by		Date	
Signature of Inventor	Craig D STACEY	Date	
Witnessed by		Date	

# ASSIGNMENT OF PATENT APPLICATION



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In witness whereof, exec	cuted by the undersigned on the date	(s) opposite ti	he undersigned signature(s).
Signature of Inventor	Richard M JENKINS	Date _	
Witnessed by		Date _	
Signature of Inventor	ME HOLD	Date -	20 Jan 06
Witnessed by	Mark E MCNIE  Michald  A. L. RICKARD	Date .	20 Jan 06
Signature of Inventor	James McQUILLAN	Date	
Witnessed by		Date	
Signature of Inventor	Craig D STACEY	Date	
Witnessed by		Date	

#### **IPD/P7294/USW**

## ASSIGNMENT OF PATENT APPLICATION

	Richard M JENKINS Mark E MCNIE James McQUILLAN Craig D STACEY
(Inventors)	<u>(</u>
	In consideration of past and future employment, and my (our) obligation to assign intellectual property generated as result of my (our) employment, the receipt and sufficiency of which consideration is hereby acknowledged, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to
(Assignee)	( QINETIQ LIMITED
(Address)	(of 85, Buckingham Gate,London SW1E 6PD United Kingdom (hereinafter designated as the Assignee) the undersigned's entire right, title and interest for the United States, its territories, dependencies and possessions, and for the country of
(Other	in the invention, and all application for patent and any Letters
Countries)	Patent which may be granted therefor, known as
(Title)	for which the undersigned has (have) executed on even date herewith an application for patent in the United States of America or, if not on even date, then has executed (on or has already filed in (U.S. appln. Serial No, filed on (The undersigned acknowledges an obligation of assignment of this invention to said assignee at the time the invention was made.

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Date Signature of Inventor Richard M JENKINS Witnessed by Date Date Signature of Inventor Mark E MCNIE Date Witnessed by Date 23rd December 2005

Date 23rd December 2005. Signature of Inventor Witnessed by Date Signature of Inventor Craig D STACEY Date Witnessed by

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).

#### IPD/P7294/USW

## ASSIGNMENT OF PATENT APPLICATION

Richard M JENKINS Mark E MCNIE James McQUILLAN Craig D STACEY

(inventors)

In consideration of past and future employment, and my (our) obligation to assign intellectual property generated as result of my (our) employment, the receipt and sufficiency of which consideration is hereby acknowledged, the undersigned agree(s)

to assign, and hereby does assign, transfer and set over to

(Assignee) (Address)

( QINETIQ LIMITED

(of 85, Buckingham Gate, London SW1E 6PD United Kingdom

(hereinafter designated as the Assignee) the undersigned's entire right, title and interest for the United States, its territories, dependencies and possessions, and for the country of

in the invention, and all application for patent and any Letters

(Other Countries) (Title)

Patent which may be granted therefor, known as

(Case No. P7294/USW)

for which the undersigned has (have) executed on even date herewith an application for patent in the United States of America or, if not on even date, then has executed

OPTICAL AMPLIFIER

or has already filed in filed on

(U.S. appln. Serial No. (The undersigned acknowledges an obligation of assignment of this invention to said assignee at the time the invention was made.

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In witness whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).

Signature of Inventor	Richard M JENKINS	Date		<u></u>	<del></del>
Witnessed by		Date			<u></u>
Signature of Inventor	Mark E MCNIE	Date			
Witnessed by	·	Date			
Signature of Inventor	James McQUILLAN	Date			
Witnessed by		Date			
Signature of Inventor	Craig D STACEY	Date	2150	December	2005
Witnessed by	Eventify.	Date	21 <sup>st</sup> ,	December	2005

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